Total No. of Questions :8] *[Total No. of Printed Pages :2*

Roll No .....

MVSE-302(C)

M.E/M.Tech., III Semester

Examination, December 2016

Design of Offshore Structures (Elective - II)

Time : Three Hours

Maximum Marks : 70

Note : i) Attempt any five questions.
ii) All questions carry equal marks.

1. Explain how iterative and transformation methods are useful for the dynamic analysis of multi D.O.F. system.

2. Discuss the behaviour of concrete gravity platform as a rigid body on soil as a continuum.

3. How are wave loads calculated by Morison's equation for offshore structures?

4. Explain the use of approximate methods for static and dynamic analysis of fixed offshore structures.

5. What is the role of aerodynamic admittance function for calculating static wind load in design of offshore structure? Discuss spectral response due to wind.

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6. Discuss the role of Fourier series and spectral method for accessing the response of single D.O.F. system.

7. a) Discuss vibrations of beams with reference to soil as half space.
   b) Explain single degree of freedom system subjected to free vibration.

8. Write short notes on Any Two of the following :
   a) Analysis of transient force
   b) Eigen values
   c) Gust factor

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